

Cast cylinder head and engine block component is made of an aluminum-silicon alloy containing aluminum-nickel, aluminum-copper, aluminum-manganese and aluminum-iron and their mixed phases**Patent number:** DE19925666**Publication date:** 2000-09-28**Inventor:** FEIKUS FRANZ JOSEF (DE); HEUSLER LEONHARD (DE)**Applicant:** VAW MOTOR GMBH (DE)**Classification:**- **international:** F02F1/24; F02F7/00- **european:** F02F7/00G; C22C21/02; C22F1/043; F02F1/24**Application number:** DE19991025666 19990604**Priority number(s):** DE19991025666 19990604**Also published as:**

EP1057900 (A1)



CA2310351 (A1)



EP1057900 (B1)



CZ293797 (B6)

Abstract of DE19925666

A cast cylinder head and engine block component, made of an aluminum-silicon alloy containing aluminum-nickel, aluminum-copper, aluminum-manganese and aluminum-iron and their mixed phases, is new. A cast cylinder head and engine block component, consisting of an aluminum alloy of composition 6.80-7.20% Si, 0.35-0.45% Fe, 0.30-0.40% Cu, 0.25-0.30% Mn, 0.35-0.45% Mg, 0.45-0.55% Ni, 0.10-0.15% Zn, 0.11-0.15% Ti, >0.05% each (>0.15% total) impurities and balance Al, contains aluminum-nickel, aluminum-copper, aluminum-manganese and aluminum-iron phases and their mixed phases. An independent claim is also included for production of the above cylinder head and engine block component by casting at 720-740 deg C, cooling at 0.1-10 K/sec. to room temperature, solution annealing at 530 deg C for 5 hr., quenching in water at 80 deg C and artificially aging at 160-200 deg C for 6 hr.

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